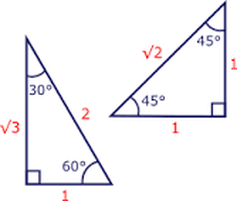
Chapter 8 Vocabulary

**1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** have two perpendicular legs that create a right angle.

However, we are most interested in right angle triangles that have measures of either

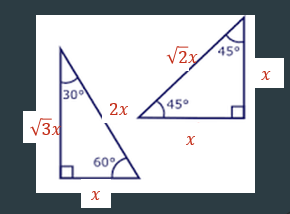
**2)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or **3)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for their angles.



Right angle triangleshave a **4)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which is across from the right angle, and two other legs.

If the two legs are of different lengths they are referred to as the **5)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and

**6)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the triangle. Otherwise, when they are of equal lengths, they are referred to as simply the **7)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the triangle.

The **8)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the legs of the right triangles are important. The ratios define the relative lengths of each leg. That is, the measure of each leg when compared to the other legs.

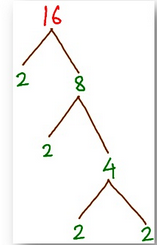
The **9)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ states that the square of the hypotenuse is equal to the sum of the squares of the two legs.

**hypotenuse2 = leg2 + leg2**

(Often shown as: a2 + b2 = c2 or x2 + y2 = z2 )

Because the relationship between the legs and hypotenuse involve terms that are squared we need to take the **10)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to solve for unknowns.

The square root symbol, , is also known as **11)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

We sometimes need to *simplify* the radical expression. This means we reduce the term that involves the radical to one that involves **12)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that cannot be further reduced.

We do this by building **13)** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or a tree of the factors that can be derived from the number. **When factoring out for radicals we can only remove pairs of numbers!**

